UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/840,055	04/24/2001	David Glenn DeGroote	1002-2U	3715

			EXAMINER
23975	7590	11/30/2004	TANG, KUO LIANG J

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ART UNIT	PAPER NUMBER
2122	

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/840,055	DEGROOTE ET AL.
	Examiner	Art Unit	
	Kuo-Liang J Tang	2122	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _24 April 2001_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-25_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-25_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   This Office Action is in response to the application filed on 4/24/2001.

The priority date for this application is 4/24/2000.

Claims 1-25 are pending and have been examined.

Claim Rejections - 35 USC § 101

2.   35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3.   Claims 1-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 1 merely claims an apparatus for generating a live component comprising a resource library, a live component editor, a library, a viewer generator and a component description generator. The resource library, a live component editor, a library, a viewer generator and a component description generator are merely software components (e.g. computer program per se). Such claimed matter is descriptive material per se, non-functional descriptive material, and is not statutory because it is not a physical "thing" nor a statutory process, as there are no "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed aspects of the invention which permit the computer program's functionality to be realized. Since a computer program is merely a set of instructions capable of being executed by a computer, the program itself is not a process, without the computer-readable medium needed to realize the computer program's

functionality. In contrast, a claimed computer-readable medium encoded with a

computer program defines structural and functional interrelationships between the

computer program and the medium which permit the computer program's functionality to

be realized, and is thus statutory. **Warmerdam**, 33 F.3d at 1361, 31 USPQ2d at 1760.

In re Sarkar, 558 F.2d 1330, 1333, 200 USPQ 132, 137 (CCPA 1978). See MPEP §

2106(IV)(B)(1)(a).

Claims 2-12, which depend from claim 1 are also rejected under 35 U.S.C. 101

for the same reason.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed
> publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5.   Claims 1-3, 6-7, 9-16, 19-20 and 22-25 are rejected under 35 U.S.C. 102(a) as

being anticipated by Design Science, Inc., "WebEQ Interactive Math on the Web", April,

1996 (see "WebEQ Equation Rendering: A Simpler Way to Include Mathematics in Web

Pages") (hereinafter DSWebEQ).

As Per Claim 1, DSWebEQ teaches that a comprehensive toolkit for building web

pages that include interactive math. The world's leading e-learning companies, content

developers and education portals are using WebEQ to create web-based learning

environments that help educators engage students in math and science on the web.

Because WebEQ is based on Java and MathML technology, solutions you develop will

be platform- and browser-independent. In that DSWebEQ discloses the method that

covering the steps of: An apparatus for generating a live component comprising:

(a) a resource library (E.g. see Page 7 and associated text);

(b) a live (E.g. see Page 7, line 20 and 26) component editor (E.g. see Page 4 and

associated text) for allowing a user to edit said live component

utilizing resources from said resource library;

(c) a library of pre-built application modules (E.g. see Page 7, line 17, 29 and

associated text);

(d) a viewer generator (E.g. see Page 14 and associated text) for creating a live

component viewer from said pre-built

application modules directed by said live component editor; and

(e) a component description generator (E.g. see Page 7, lines 24-26, which states

"... PathAnimator accepts ... functions that describe the position of ..." and associated

text and see Page 10 and associated text) for creating a live component description file

directed by said live component editor.

As Per claim 2, the rejection of claim 1 is incorporated and further DSWebEQ

teaches:

"wherein said live component editor is a live component editor and simulator

capable of simulating said live component" (E.g. see Page 7 and associated text).

As Per claim 3, the rejection of claim 1 is incorporated and further DSWebEQ teaches:

"wherein said live component is downloaded from a server (E.g. see Page 19, "server" and associated text) to a local system (E.g. see Page 19, "client" and associated text), wherein algorithms in said live component are executed on said local system" (E.g. see Page 19 and associated text).

As Per claim 6, the rejection of claim 1 is incorporated and further DSWebEQ teaches:

"wherein said live component description file includes live component viewer instructions" (E.g. see Page 7, lines 24-26, which states "... PathAnimator accepts ... that describe the position of ..." and associated text and see Page 10 and associated text).

As Per claim 7, the rejection of claim 6 is incorporated and further DSWebEQ teaches:

"wherein said live component viewer instructions include XML" (E.g. see Page 16, lines 2-4, MathML and see Page 21, box MathML). The examiner interprets that MathML is another form of XML.

As Per claim 9, the rejection of claim 7 is incorporated and further DSWebEQ teaches:

"wherein said XML is MathML" (E.g. see Page 16, lines 2-4, MathML and see Page 21, box MathML).

As Per claim 10, the rejection of claim 9 is incorporated and further DSWebEQ teaches:

"wherein said MathML indudes live MathML extensions" (E.g. see Page 16-17, 21 and associated text).

As Per claim 11, the rejection of claim 10 is incorporated and further DSWebEQ teaches:

"wherein said live MathML extensions comprises at least one extension selected from the group of:

(a) a bi-directional equals operator (E.g. see Page 13-14 and associated text);

(b) an edit attribute indicating if a value is editable; and

(c) a display attribute indicating a name and format for a display".

As Per claim 12, the rejection of claim 11 is incorporated and further DSWebEQ teaches:

"wherein said resource library includes at least one of the set of:

(a) rules (E.g. see Page 11   and associated text);

(b) definitions (E.g. see Page 7, line 23-24 and associated text);

(c) default values; and

(d) resources" (E.g. see Page 7 and associated text).

As Per claim 13, DSWebEQ teaches a method for generating a live component comprising the steps of:

"(a) opening an initial live component with a live component editor (E.g. see Page 4 and associated text)";

"(b) iteratively updating said live component by:

(i) selecting an operand for modification (E.g. see Page 10, "Angle of the cannon (degrees)" and see Page 13, operand y) ;

(ii) selecting a step from the group of steps (E.g. see Page 11, boxes "next step", "back up" and "start over") consisting of:

(1) modifying the properties of said selected operand (E.g. see Page 13, operand y); and

(2) inserting an additional operation (E.g. see Page 13, operation '=' and '-'), selected from a library of pre-built application modules (E.g. see Page 7, line 17, 29 and associated text), that operates on said operand using predetermined rules that correspond to said additional operation (E.g. see Page 8, 10-11 and associated text);

"(c) saving the modified live component by:

(i) creating a live component viewer (E.g. see Page 14 and associated text) using said pre-built application modules directed by said rules based editor; and

(ii) creating a live component description file directed by said rules based editor (E.g. see Page 7, lines 24-26, which states "… PathAnimator

accepts ... functions that describe the position of ..." and associated text

and see Page 10 and associated text)".

As Per claim 15, the rejection of claim 13 is incorporated and further DSWebEQ

teaches:

"wherein said initial live component is a default live component" (E.g. see Page

22, line 23).

As per Claims 14, 16, 19-20, 22-25 the rejection of claim 13 are incorporated and

are rejected under the same reason set forth in connection of the rejection of claims 2-3,

6-7, 9-12 respectfully.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 4-5 and 17-18 rejected under 35 U.S.C. 103(a) as being unpatentable over

DSWebEQ in view of Kroeker et al. US Patent No. 6,073,232 (hereinafter Kroeker),

further in view of Charlet et al., US Patent No. 6,715,109 (hereinafter Charlet)

As Per claim 4, the rejection of claim 1 is incorporated and further DSWebEQ

does not explicitly disclose compiled code and assembled code. However, Kroeker in an

analogous art teaches in a manner such as "Computer executable instructions include

compiled code and assembled code" (E.g. see col. 4:58-59) Therefore, it would have

been obvious to incorporate the teaching of Kroeker into the teaching of DSWebEQ to

include compiled code and assembled code. The modification would have been obvious

because one of ordinary skill in the art would have been motivated to use compiled code

and assembled code as computer executable instruction to execute the program.

The combination teaching of DSWebEQ and Kroeker does not explicitly disclose

interpreted script. However, Charlet in an analogous art teaches in a manner such as

"Computer executable instructions include interpreted script" (E.g. see col. 4:58-59)

Therefore, it would have been obvious to incorporate the teaching of Charlet into the

teaching of DSWebEQ and Kroeker to include interpreted script. The modification would

have been obvious because one of ordinary skill in the art would have been motivated to

use interpreted script as computer executable instruction to execute the program.

As per Claim 5, the rejection of claim 1 is incorporated and is rejected under the

same reason set forth in connection of the rejection of claim 4.

As per Claims 17-18, the rejection of claim 13 are incorporated and are rejected

under the same reason set forth in connection of the rejection of claim 4 respectfully.

8.   Claims 8 and 21 rejected under 35 U.S.C. 103(a) as being unpatentable over

DSWebEQ in view of Itakura et al. US Patent No. 6,157,946 (hereinafter Itakura).

As Per claim 8, the rejection of claim 6 is incorporated and further DSWebEQ

does not explicitly disclose that viewer instructions includes data links. However, Itakura

in an analogous art teaches in a manner such as "viewer instructions includes data links"

(E.g. see col. 19:65-66) Therefore, it would have been obvious to incorporate the

teaching of Itakura into the teaching of DSWebEQ so that viewer instructions includes

data links. The modification would have been obvious because one of ordinary skill in

the art would have been motivated to the connection manager and the message manager.

As per Claim 21, the rejection of claim 19 is incorporated and is rejected under

the same reason set forth in connection of the rejection of claim 8.

Conclusion

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Kuo-Liang J Tang whose telephone number is (571) 272-

3705. The examiner can normally be reached on 8:30AM - 7:00PM (Monday –

Thursday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Tuan Dam can be reached on (571) 272-3695. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

Kuo-Liang J. Tang

Software Engineer Patent Examiner

**CHAMELI C. DAS
PRIMARY EXAMINER**

11/26/04.